

US App. No. 10/560,470  
Response to 1/17/08 Office Action

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**Amendments to the Claims:**

This listing of claims replaces all prior versions and listings of the claims in this application:

Claims 1-14 (Canceled).

15. (Currently Amended) A method of monitoring the effectiveness of an anti-cancer agent for treating estrogen responsive cancers, said method comprising the steps of contacting estrogen responsive cancer cells with said anti-cancer agent; monitoring ERK8 levels detected by an antibody that specifically binds to the peptide of SEQ ID NO: 1 in estrogen responsive cancer cells contacted with said agent, wherein an increase in said ERK8 levels after contact with said agent indicates efficacy for said anti-cancer agent.

16. (Original) The method of claim 15 wherein the cancer cells are contacted *in vitro* as a means of identifying new anti-cancer agents.

17. (Original) The method of claim 16 wherein the cancer cells are selected from various established tumor cell lines.

18. (Original) The method of claim 15 wherein the cancer cells are recovered from a patient and treated *in vitro*.

Claims 19-20 (Canceled).

21. (New) The method of claim 15 wherein the cancer cells are contacted *in vivo* with said anti-cancer agent and the cancer cells are recovered from said patient for monitoring ERK8 levels.

22. (New) The method of claim 15 wherein the cancer cells are breast cancer cells.

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23. (New) A method of monitoring the effectiveness of an anti-cancer agent for treating estrogen responsive cancers, said method comprising the steps of contacting estrogen responsive cancer cells with said anti-cancer agent; monitoring the levels of a peptide comprising the amino acid sequence of SEQ ID NO: 1, in estrogen responsive cancer cells contacted with said agent; wherein an increase in ERK8 levels after said contact with said agent indicates efficacy for said anti-cancer agent.
24. (New) The method of claim 23 wherein the cancer cells are breast cancer cells.